

Freight Element

Introduction

Of the seven planning factors, two are directly related to freight. They are:

- increase the accessibility and mobility options available to people and for freight
- enhance the integration and connectivity of the transportation system, across and between modes, for people and freight

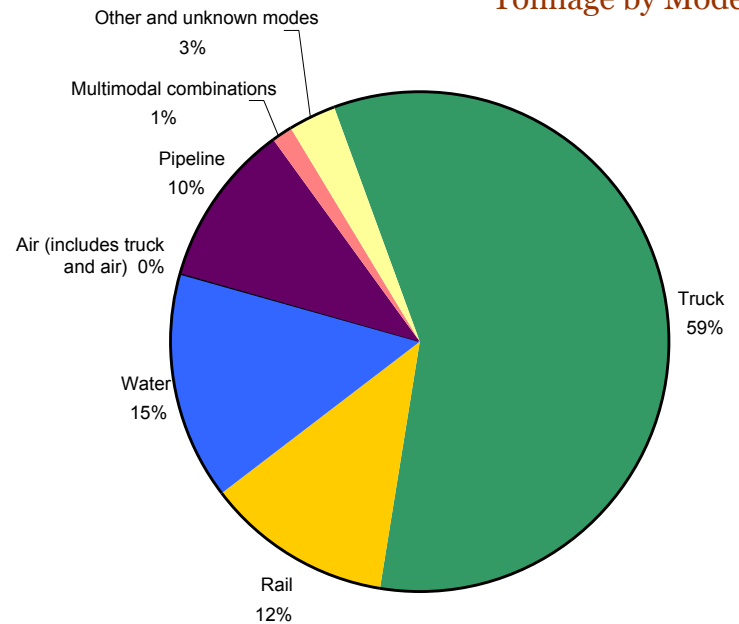
Yet the movement of goods is often overlooked. Freight activities play a vital role in our economy and our everyday lives.

Freight moves by highways, rail, aviation, pipeline and waterways (ports). Greensboro was an early crossroad for the railroads, moving freight between the ports to the east and inland connections to the north, west and south. This logistical network contributed significantly to the local and regional economy. The highway system also placed Greensboro at a crossroad of the interstate system. The combination of the two major modes of freight transportation linkages made Greensboro home to one of only two Intermodal terminals in the state. Two major pipelines provide another important source of freight transport, once again with Greensboro at the crossroad. Finally, there are currently 6 air cargo terminals operating within the Greensboro area with another set to make this their southeastern hub of operation.

Highway and Rail Freight Trends

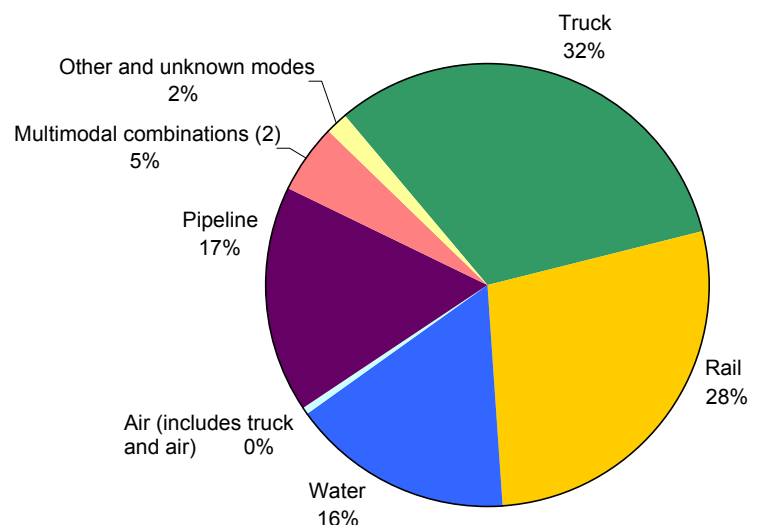
Trucks and rail account for 65 percent of the nation's domestic freight volume. Both have been showing significant growth over the last 10 years. Changes in retail and manufacturing to “just in time” freight deliveries have increased the amount of freight in transit at any given time. It has

Figure 8.1 – 2002 US Freight Tonnage by Mode



Source: Bureau of Transportation

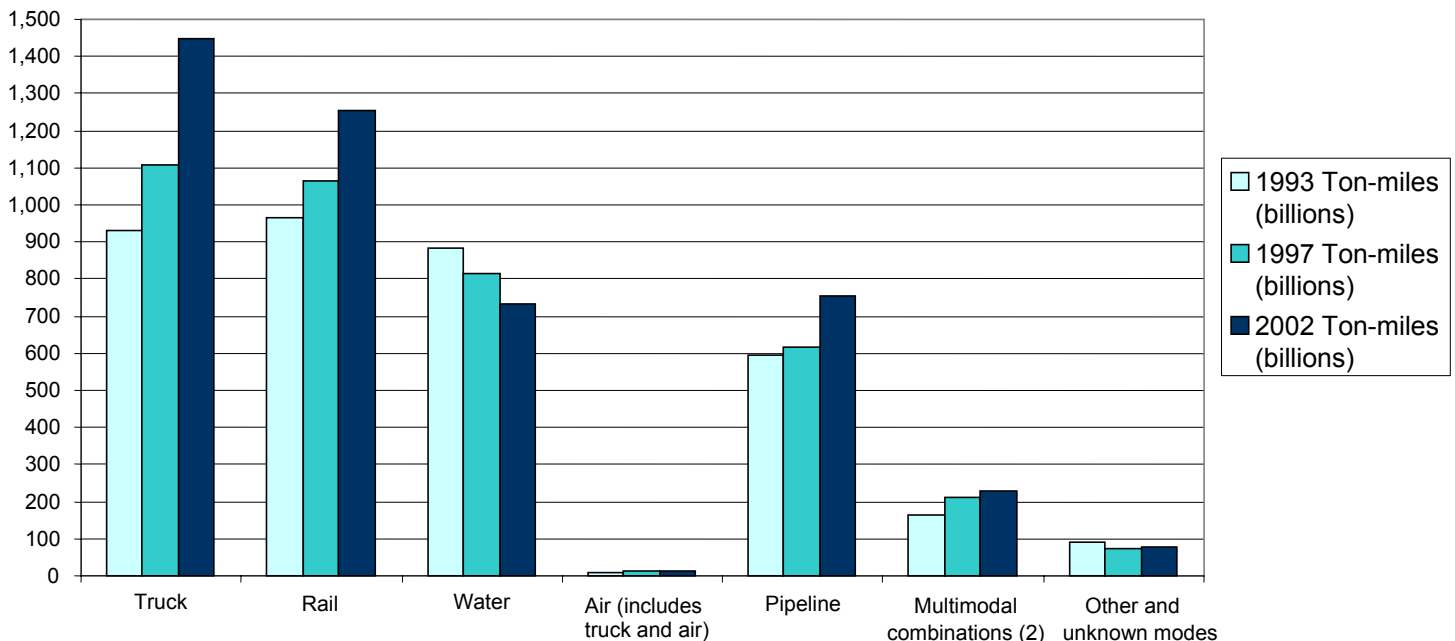
Figure 8.2 – 2002 US Freight Ton-Miles by Mode



Source: Bureau of Transportation Statistics

been said that the rail lines and highways of the country have become the nation's largest warehouse. These two modes, along with air cargo, are adapting to meet the needs of their customers.

Figure 8.3 - US Freight Trend Comparison by Mode



Existing Conditions

Highways

Today's freight movements are not merely concentrated on the major arterials of the urban area. Trucks, specifically tractor trailers, are making deliveries at nearly all retail establishments, from the smallest fast food joint to the largest big box retailer. They are making pick-ups at small manufacturers who can ship using less than truckload (LTL) rates that are almost as competitive as the big manufacturers.

The primary routes connecting Greensboro to other metropolitan regions and locations outside of North Carolina are the interstates and US Highways. Greensboro is located at the intersection of I-40 and I-85, as well as a number of future interstate facilities including future I-73 (NC 68 and US220), I-785 (US 29) and I-840. The interstates are being reconstructed to bypass the central area of Greensboro, which will allow through traffic to



I-85 with significant truck volumes

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transit the area and bypass much of the congestion associated with the increased retail activity along those corridors.

The primary north-south freight corridor is I-85. This corridor connects Greensboro with Montgomery, Atlanta and Charlotte to the south and Richmond to the north. I-40 is the primary east-west freight corridor through the region. This road stretches from Wilmington on the east coast to the deserts of California. These two interstates currently merge to the east of Greensboro to Hillsborough. A new bypass is under construction at this time to merge the two interstates to the west of Greensboro.

Rail

Today, essentially four rail lines run through Greensboro. These lines haul freight by Norfolk-Southern. The North Carolina Railroad (NCR) owns the line going east to Raleigh and south to Charlotte. Referred to as the H-line, this line facilitates both Amtrak passenger rail service as well as Norfolk-Southern freight. This line also represents a portion of the high-speed rail corridor connecting Washington, D.C. to Atlanta, GA. Norfolk Southern operates the remaining three lines including: the K-line to Winston-Salem, the CF-Line to the south, and a mainline north to Washington, D.C. Many industries operate in the Greensboro area that utilize rail for the import of material resources and export of products and by-products. Significant rail volumes move through the area and provide a competitive alternative to freight movements. This heightens the need to plan for future rail improvements. The East Guilford Track Separation Study and NCDOT's Sealed Corridor Initiative are proactive approaches for improvements and increased rail speeds through area.

Air Cargo

Piedmont Triad International Airport is located on the north side of I-40, to the west of downtown Greensboro. Passenger traffic is an important component of the operations of PTIA; however, air cargo operations are an integral part of airport business and its operating revenues. PTIA currently serves 6 air cargo carriers and has been selected by FedEx for the development its southeast hub facility. When FedEx hub operations begin at the airport, cargo-related aircraft traffic will increase, as well as related truck traffic. Corresponding airfield and roadway improvements are planned to accommodate the increased operations. As the airport expansion occurs, supportive landside improvements and enhancements to the area road network will be important to provide ample access to the new freight terminal. Additional information regarding the airport expansion can be found in the chapter 9 of this report.



South Elm Street Rail Crossing

"...for every truck that FedEx is proposing to utilize, we should multiply that by 50% to account for the spin-off industries / development that will arise."

-Mr. Don Breault, President
Triad Transportation Association



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The implementation of the Piedmont Triad Airport Area Transportation Study also will be important. This plan was developed as a joint effort between NCDOT, the Piedmont Authority for Regional Transportation, the Greensboro MPO, High Point MPO, and Winston-Salem MPO. The major focus of the study was to evaluate the need for additional freeway connections in western Guilford County. The study findings include a rerouted I-73, an I-40 Business Connector, a Forsyth Airport Connector, and a Sandy Ridge Road Connector. The study also recommends the addition of corridors to the Greensboro Thoroughfare Plan, and further study be made of these corridors.

Triad Transportation Association

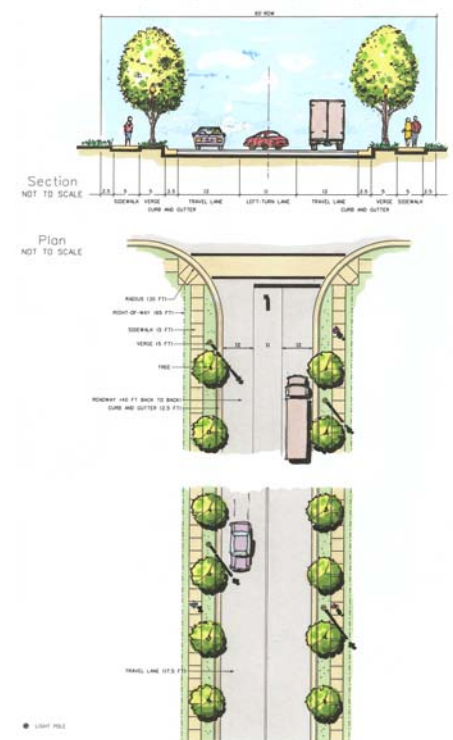
Public involvement outreach for the LRTP included a meeting with representatives from the Triad Transportation Association (TTA). The TTA membership is composed of more than 80 local and regional freight carriers. Representatives of the group communicated the importance of freight transportation in the Triad and their expectations for continued growth in the industry. The group also confirmed regional and national trends. They are pleased with the existing conditions within the vicinity but did note the following corridors as locations that need improvements to accommodate increased truck traffic: US 220, NC 68, I-40, Wendover Avenue, and US 29. TTA views the establishment of a FedEx hub at PTIA as a priority for carriers and mentioned the need to improve access to the airport and encouraged the implementation of planned highways and the Urban Loop as other notable priorities. The members also encourage improved design standards for roadways in order to better accommodate trucks.

Design Considerations

The design of all roadways should be consistent with their intended function and be responsive to the environment through which they pass. This principle is especially important when considering roads that are used by trucks.

Common design elements that are a priority for trucks include appropriate lane widths, turning radii, and adequate separation for pedestrian facilities. A general set of design considerations to ensure the roads can safely accommodate truck is as follows:

- Edge treatment/wide paved shoulders
- Curb and gutter preferred
- Ditch/swale in unincorporated areas adequately set back
- Lane widths: 12 feet



- Design/posted speed: 30-55 mph
- Turning radii: minimum 40 feet
- On-street parking prohibited within 30 feet of intersections

Intermodal Management System

A number of transportation and private projects are expected to have a significant effect on the freight traffic throughout the GUAMPO and the Triad region. Interstate improvements and the FedEx hub at the Piedmont Triad International Airport will increase dramatically the number of tractor-trailer and air-freight trips into the region. Planned improvements to the rail infrastructure will provide additional capacity for more rail-freight trips in to the Triad region. To prepare for and efficiently manage the future freight traffic it is recommended that the region develop and adopt an Intermodal Management System (IMS) to meet the growing needs of freight transportation planning in the region. The benefits of an IMS include increased emphasis on freight planning, identification of modal conflicts, identification of transportation improvement specifically intended to improve freight traffic in the region, and involvement of the local and state freight industries in the regional planning process.

Summary Recommendations

The following recommendations are a set of action items that are intended to improve the efficient and safe movement of goods and services in the study area:

- Continued expansion of the highway system to provide improved access and circulation around major transportation corridors
- Continued investments within the vicinity of PTIA as outlined in the Airport Area Plan, Greensboro Comprehensive Plan, Thoroughfare and Collector Street Plan
- Implementation of an Intermodal Management System
- Coordinate with NCDOT on the development of future rail improvements, including the development of a K-Line Track Separation study
- Closely coordinate area roadway planning with freight objectives, including access and mobility in the context of other community planning objectives